Z=x+iy where i=$\sqrt{-1}$ & i^2=-1

X=real_part=Re(z)=x

Y=real_part=Im(z)=y

Three form complex number

1)Cartesian form =z = x+**i**y

2)Polar form = r[cosθ+isinθ]

3)Exponetial =$re^i\theta$

1) modulus of complex number   Z= x+iy

$$r = |z| \sqrt{x^2 + y^2}$$

2)Amplitude /argument of complex number z = x+iy

$$Amp(z) = \theta = \tan^{-1}\left(\frac{y}{x}\right)$$

- Obtained vector = Rotating vector $*e^{\pm i}\theta$

    + for anticlock & - for clock

• De moivres Theorem :-

i) $(cos\theta + isin\theta)^n = \cos(n\theta) + isin(n\theta)$

ii) $(cos\theta + isin\theta)^{-n} = \cos(n\theta) - isin(n\theta)$